CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.15/NS/CSR-4/820e/CEMENT/2015-16 Date: 23.04.2015

TEST REPORT ON CEMENT

* CUSTOMER	:	**Asst. Executive Engineer**, T. Dasarahalli Sub Division, BBMP, Bangalore.
*AGENCY	:	**Mr. N. Shivananda,** No.35, 2nd Cross, 1st A Main Road, Defiance Colony, Bagalagunte, Bangalore.
*NAME OF THE WORK	:	Improvements & Construction of CC road & drain at Bhuvaneshwari Nagara, Ganesha Temple 3rd Cross road in Dasarahalli Ward No.15, BBMP, Bangalore.
*REFERENCE	:	BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015
SAMPLE ID	:	Cement - Sample 3
SAMPLE RECEIVED ON	:	20.04.2015
PERIOD OF TESTING	:	20.04.2015 to 23.04.2015

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	31.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	150 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	485 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

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Chief Executive Officer

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Job No.: CTCE/BBMP/W.No.15/NS/CSR-4/820e/SAND-Gradation/2015-16 : 23.04.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

* Customer : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

* Agency : **Mr. N. Shivananda,**
No.35, 2nd Cross, 1st A Main Road, Defiance Colony, Bagalagunte, Bangalore.

* Name of Work : Improvements & Construction of CC road & drain at Bhuvaneshwari Nagara, Ganesha Temple 3rd Cross road in Dasarahalli Ward No.15, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates - Sample 3

Sample Received on : 20.04.2015

Date of Testing : 23.04.2015

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	94.00	90-100	90-100	90-100	95-100
2.36	72.00	60-95	75-100	85-100	95-100
1.18	47.00	30-70	55-90	75-100	90-100
600 Micron	24.70	15-34	35-59	60-79	80-100
300 Micron	14.70	5-20	8-30	12-40	15-50
150 Micron	6.20	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

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Job No.: CTCE/BBMP/W.No.15/NS/CSR-4/820e/AGG/GR/2015-16 : 23.04.2015

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

* Customer	: **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	: **Mr. N. Shivananda,** No.35, 2nd Cross, 1st A Main Road, Defiance Colony, Bagalagunte, Bangalore.
* Name of Work	: Improvements & Construction of CC road & drain at Bhuvaneshwari Nagara, Ganesha Temple 3rd Cross road in Dasarahalli Ward No.15, BBMP, Bangalore.
Reference	: BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015
Technical Reference	: IS : 2386 Part 1 -1963 RA-2007
Sample ID	: Coarse Aggregates (40mm) - Sample 3
Sample Received on	: 20.04.2015
Date of Testing	: 23.04.2015

Total Wt. of Aggregates in gms= **10000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	96.50	95-100	85-100
20	44.50	30-70	0-20
10	16.00	10-35	0-5
4.75	1.00	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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Job No.: CTCE/BBMP/W.No.15/NS/STEEL/2015-16 27.04.2015

TEST REPORT ON REINFORCEMENT STEEL

Customer	:	**Asst. Executive Engineer**, T. Dasarahalli Sub Division, BBMP, Bangalore.
Agency	:	**Mr. N. Shivananda,** No.35, 2nd Cross, 1st A Main Road, Defiance Colony, Bagalagunte, Bangalore.
Name of the Work	:	Improvements & Construction of CC road & drain at Bhuvaneshwari Nagara, Ganesha Temple 3rd Cross road in Dasarahalli Ward No.15, BBMP, Bangalore.
Reference	:	BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015
Date of Test	:	27.04.2015
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	8	0.40	510	552	13.10	O.K	O.K

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Job No.: CTCE/BBMP/W.No.15/NS/STEEL/2015-16 27.04.2015

TEST REPORT ON REINFORCEMENT STEEL

Customer	:	**Asst. Executive Engineer**, T. Dasarahalli Sub Division, BBMP, Bangalore.
Agency	:	**Mr. N. Shivananda,** No.35, 2nd Cross, 1st A Main Road, Defiance Colony, Bagalagunte, Bangalore.
Name of the Work	:	Improvements & Construction of CC road & drain at Bhuvaneshwari Nagara, Ganesha Temple 3rd Cross road in Dasarahalli Ward No.15, BBMP, Bangalore.
Reference	:	BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015
Date of Test	:	27.04.2015
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	10	0.62	513	556	13.35	O.K	O.K

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Job No.: CTCE/BBMP/W.No.15/NS/WMM/Gradation/2015-16

11.05.2015

GRADATION FOR WMM
MORTH TABLE-400-11

Customer : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

Agency : **Mr. N. Shivananda,**
No.35, 2nd Cross, 1st A Main Road, Defiance Colony, Bagalagunte, Bangalore.

Name of Work : Improvements & Construction of CC road & drain at Bhuvaneshwari Nagara, Ganesha Temple 3rd Cross road in Dasarahalli Ward No.15, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015

Date of Testing : 11.05.2015

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **26900**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	950	950	3.5	96.5	95-100
22.4	6545	7495	27.9	72.1	60-80
11.2	6000	13495	50.2	49.8	40-60
4.75	4100	17595	65.4	34.6	25-40
2.36	4350	21945	81.6	18.4	15-30
0.600	2100	24045	89.4	10.6	8-22
0.075	1905	25950	96.5	3.5	0-8

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Job No.: CTCE/BBMP/W.No.15/NS/CSR-4/820e/CUBE/2015-16 25.05.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. N. Shivananda,** No.35, 2nd Cross, 1st A Main Road, Defiance Colony, Bagalagunte, Bangalore.

*** Name of the work** : Improvements & Construction of CC road & drain at Bhuvaneshwari Nagara, Ganesha Temple 3rd Cross road in Dasarahalli Ward No.15, BBMP, Bangalore.

*** Reference** : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015

*** Sample ID** : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{15}

Compressive Strength as on : 28th day

Sample Received on : 27.04.2015

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	27.04.2015	25.05.2015	8.098	345.5	15.36
2	27.04.2015	25.05.2015	8.125	350.5	15.58
3	27.04.2015	25.05.2015	8.236	368.5	16.38

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Job No.: CTCE/BBMP/W.No.15/NS/CSR-4/820e/CUBE/2015-16 25.05.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. N. Shivananda,** No.35, 2nd Cross, 1st A Main Road, Defiance Colony, Bagalagunte, Bangalore.

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Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{15}

Compressive Strength as on : 28th day

Sample Received on : 27.04.2015

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	27.04.2015	25.05.2015	8.137	368.8	16.39
2	27.04.2015	25.05.2015	8.255	375.6	16.69
3	27.04.2015	25.05.2015	8.300	382.5	17.00

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